1. Significant Accounting Policies

A. Basis of Presentation

These consolidated financial statements have been prepared to report the financial position and results of operations of the U.S. Department of Energy (DOE). They have been prepared from the books and records of DOE based on accounting principles and standards recommended by the Federal Accounting Standards Advisory Board. These accounting standards are generally accepted accounting principles for the Federal government and consist of a hierarchy of individual standards published by the Joint Financial Management Improvement Program, Office of Management and Budget (OMB), in OMB Bulletin No. 94-01, *Form and Content of Agency Financial Statements;* DOE accounting guidance; and accounting principles published by authoritative standard setting bodies.

B. Description of Reporting Entity

DOE is a cabinet level agency of the Executive Branch of the U.S. Government. DOE's headquarters organizations are located in Washington, D.C. and Germantown, MD and consist of an executive management structure that includes: the Secretary, the Deputy Secretary, and the Under Secretary; nine Secretarial staff organizations; and program organizations that provide technical direction and support for DOE's principal programmatic missions. DOE also includes the Federal Energy Regulatory Commission, which is an independent regulatory organization responsible for setting rates and charges for the transportation and sale of natural gas and for the transmission and sale of electricity and the licensing of hydroelectric power projects.

DOE has a complex field structure comprised of operations offices, field offices, power marketing administrations, laboratories, and other facilities. The majority of DOE's environmental cleanup, energy research and development, and testing and production activities are carried out by major contractors. These contractors operate, maintain, or support DOE's government-owned facilities on a day-to-day basis and provide other special work under the direction of field organizations.

These contractors have unique contractual relationships with DOE. In most cases, their chart of accounts and accounting systems are integrated with DOE's accounting system through a home office-branch office type of arrangement. Additionally, DOE is ultimately responsible for funding certain defined benefit pension plans, as well as post retirement benefits such as medical care and life insurance, for the employees of these contractors. As a result, these statements reflect not only the costs incurred by these contractors, but also include certain assets (i.e., employee advances and prepaid pension costs) and liabilities (i.e., accounts payable, accrued expenses including payroll and benefits, and pension and other actuarial liabilities) that would not be reflected in the financial statements of other Federal agencies that do not have these unique contractual relationships.

C. Basis of Accounting

Transactions are recorded on an accrual accounting basis and a budgetary basis. Under the accrual method, revenues are recognized when earned, and expenses are recognized when a liability is incurred, without regard to receipt or payment of cash. Budgetary accounting facilitates compliance with legal constraints and controls over the use of Federal funds. All material intra-agency balances and transactions have been eliminated in consolidation.

D. Revenues and Other Financing Sources

DOE receives the majority of the funding needed to perform its mission through congressional appropriations. These appropriations may be used, within statutory limits, for operating and capital expenditures. Appropriations are recognized as a financing source at the time the related operational or administrative expenses are incurred. Appropriations expended for property, plant and equipment are recognized as financing sources when the asset is consumed in operations. Revenues are recognized when earned (i.e., goods have been delivered or services rendered.) (See Notes 18 and 19)

E. Funds with Treasury and Cash

Funds with Treasury represent appropriated funds, trust funds, and revolving funds that are available to pay current liabilities and finance authorized purchase commitments. Cash balances held outside Treasury represent trust fund balances held in minority financial institutions, letter of credit collateral balances, and imprest cash amounts. (See Note 2)

F. Investments

Investments in Treasury securities for the Nuclear Waste Fund are classified as available for sale and are reported at fair value in accordance with Financial Accounting Standard No. 115, *Accounting for Certain Investments in Debt and Equity Securities.* All other DOE investments are reported at cost net of amortized premiums or discounts, as it is DOE's intent to hold the investments to maturity. Premiums or discounts are amortized using the effective interest method. (See Note 3)

G. Accounts Receivable, Net of Allowance

The amounts due for governmental (non-Federal) receivables are stated net of an allowance for uncollectible accounts. The estimate of the allowance is based on past experience in the collection of receivables and an analysis of the outstanding balances. (See Note 4)

H. Property, Plant and Equipment

Property, plant and equipment that are purchased, constructed, or fabricated in-house, including major modifications or improvements, are capitalized if they have an anticipated service life of 2 years or more and cost $5,000 or more. Costs of construction are capitalized as construction work in process. Upon completion or beneficial occupancy, the cost is transferred to the appropriate property account. Property, plant and equipment related to environmental management facilities processing DOE's environmental legacy wastes are not capitalized. (See Notes 6 and 23)

Depreciation expense is generally computed using the straight line method throughout DOE. The units of production method may be used only in special cases where applicable, such as depreciating automotive equipment on a mileage basis and construction equipment on an hourly use basis. The ranges of service lives are generally as follows:

Structures	25 - 40 years
ADP Software	5 - 20 years
Equipment	5 - 45 years

I. Liabilities

Liabilities represent funds or other resources likely to be paid by DOE as a result of a transaction or event that has already occurred. However, no liability can be paid by DOE absent an authorized appropriation. Liabilities for which an appropriation has not been enacted are, therefore, classified as unfunded liabilities, and there is no certainty that the appropriations will be enacted. Also, liabilities of DOE arising from other than contracts can be abrogated by the Government, acting in its sovereign capacity.

J. Accrued Annual, Sick and Other Leave

Employee annual leave is accrued as it is earned, and the accrual is reduced annually for actual leave taken and increased for leave earned. Each year, the accrued annual leave balance is adjusted to reflect the latest pay rates. To the extent that current or prior year appropriations are not available to fund annual leave earned but not taken, funding will be obtained from future financing sources. Sick leave and other types of nonvested leave are expensed as taken.

K. Retirement Plans

Federal Employees

There are two retirement systems for Federal employees. DOE employees hired prior to January 1, 1984 may participate in the Civil Service Retirement System (CSRS), to which DOE makes matching contributions equal to 7 percent of pay. On January 1, 1984, the Federal Employees Retirement System (FERS) went into effect pursuant to Public Law 99-335. Most employees hired after December 31, 1983, are automatically covered by FERS and Social Security. Employees hired prior to January 1, 1984, elected to either join FERS and Social Security or remain in CSRS. A primary feature of FERS is that it offers a savings plan to which DOE automatically contributes 1 percent of pay and matches any employee contribution up to an additional 4 percent of pay. For most employees hired since December 31, 1983, DOE also contributes the employer's matching share for Social Security. DOE does not report CSRS or FERS assets, accumulated plan benefits, or unfunded liabilities, if any, applicable to its employees. Reporting such amounts is the responsibility of the Office of Personnel Management and the Federal Employees Retirement System.

Contractor Employees

Most DOE contractors have a defined benefit pension plan under which they promise to pay specified benefits, such as a percentage of the final average pay for each year of service. DOE costs under the contracts include reimbursement of annual employer contributions to the pension plans. Each year, an amount is calculated for employers to contribute to the pension plan to ensure the plan assets are sufficient to provide for the full accrued benefits of contractor employees in the event that the plan is terminated. The level of contributions is dependent on actuarial assumptions about the future, such as the interest rate, employee turnover and deaths, age of retirement, and salary progression. (See Note 14)

L. Comparative Data

Comparative data for the prior year have not been presented because this is the first year for which DOE has issued financial statements on a consolidated basis. In future years, comparative data will be presented in order to provide an understanding of changes in DOE's financial position and operations.

M. Use of Estimates

DOE has made certain estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of the contingent assets and liabilities to prepare these consolidated financial statements. Actual results could differ from these estimates.

2. Fund Balance with Treasury

(in millions)

	Obligated	-------Unobligated------- Unrestricted	Restricted	Investments in Treasury Securities	Total Fund Balances With Treasury
Agency Funds					
Revolving funds	($16)	$262	$3		$249
Appropriated funds	7,992	1,859	561		10,412
Special funds	271	107	5,652	($5,790)	240
Deposit funds			10		10
Total agency funds	$8,247	$2,228	$6,226	($5,790)	$10,911
Custodial Funds					
Trust funds	12				12
Special funds			3		3
Deposit funds			22		22
Total custodial funds	$12		$25		$37
Total funds in Treasury	$8,259	$2,228	$6,251	($5,790)	$10,948

The unobligated restricted funds primarily represent revenues that have been collected and are being held until such time that Congress appropriates the funds to DOE or directs DOE to return the funds to Treasury. The appropriated funds represent primarily revenues earned from the sale of oil prior to FY 1994 from the Naval Petroleum and Oil Shale Reserves which Congress has not made available to DOE. The special and deposit funds represent revenues from the Nuclear Waste Fund, Uranium Enrichment Decontamination and Decommissioning Fund, and the Petroleum Pricing Violation Escrow Fund.

3. Investments

(in millions)

	Cost	Market Value	Amortized (Premium) Discount	Investments Net
Agency Assets				
Intragovernmental Non-Marketable Securities				
Nuclear Waste Fund	$6,102	$5,897	($129)	$5,897
Uranium Enrichment D&D Fund	486	482	(2)	484
Great Plains Gasification Plant Trust Fund	21	21		21
Subtotal	$6,609	$6,400	($131)	$6,402
Governmental Marketable Securities				
Du Pont pension receipts	72	72		72
Total agency investments	$6,681	$6,472	($131)	$6,474
Custodial Assets				
Intragovernmental Non-Marketable Securities				
Petroleum Pricing Escrow Fund	394	397	3	397
Low Level Radioactive Waste Fund	4	4		4
Subtotal	$398	$401	$3	$401
Governmental Marketable Securities				
Petroleum Pricing Violation Escrow Fund	200	200		200
Total custodial investments	$598	$601	$3	$601
Total investments	$7,279	$7,073	($128)	$7,075

Pursuant to statutory authorizations, DOE invests monies in Treasury securities and commercial certificates of deposit which are secured by the Federal Deposit Insurance Corporation. DOE's investments primarily involve the Nuclear Waste Fund and the Uranium Enrichment Decontamination and Decommissioning (D&D) Fund. Fees paid by owners and generators of spent nuclear waste and fees collected from domestic utilities are deposited into the respective funds. Funds in excess of those needed to pay current program costs are invested in Treasury securities. DOE also has non-Federal securities resulting from an over funded pension plan of a former contractor and the 1988 sale of the Great Plains Coal Gasification Project to a private concern.

DOE custodial investments are primarily Petroleum Pricing Violation Escrow Fund receipts collected as a result of consent agreements reached with individuals or firms that violated petroleum pricing regulations during the 1970s. These receipts are invested in Treasury securities and certificates of deposit at minority financial institutions pending determination by DOE as to how to distribute the fund balance.

Except for the Nuclear Waste Fund, DOE's investments are valued at the amortized acquisition cost. The Nuclear Waste Fund investments are reported at fair value in accordance with Financial Accounting Standard No. 115, *Accounting for Certain Investments in Debt and Equity Securities*, which requires the valuation of investments at fair value when there is an intent to sell the securities prior to maturity. Based on past investment practices, the Nuclear Waste Fund's Treasury notes are routinely redeemed prior to maturity in order to maximize the return on the Fund's investments and minimize uninvested cash balances. As a result, the Nuclear Waste Fund's investment balance includes an unrealized holding loss of $76 million.

4. Accounts Receivable

(in millions)

	Receivable	Allowance	Net
Agency Receivables			
Intragovernmental			
Accounts receivable	$569		$569
Interest receivable	114		114
Advances	5		5
Subtotal	$688		$688
Governmental			
Nuclear Waste Fund receivables	2,216		2,216
Uranium Enrichment D&D Fund receivables	1,790		1,790
Power marketing administrations' receivables	339	($2)	337
Advances and prepayments	66		66
Credit program receivables	63	(26)	37
Other	346	(124)	222
Subtotal	$4,820	($152)	$4,668
Total agency receivables	$5,508	($152)	$5,356
Custodial Receivables			
Petroleum Pricing Violation Escrow Fund	2,492	(2,318)	174
Total receivables	$8,000	($2,470)	$5,530

Intragovernmental accounts receivable primarily represent amounts due from other Federal agencies for reimbursable work performed pursuant to the Economy Act, Atomic Energy Act, and other statutory authority. Interest receivable represents earned revenues on investments held in Treasury securities.

Governmental receivables represent amounts due primarily for Nuclear Waste Fund (NWF) and Uranium Enrichment Decontamination and Decommissioning (D&D) Fund fees. NWF receivables are supported by contracts and agreements with public utilities that contribute resources to the fund. D&D Fund receivables from public utilities are supported by public law. Other receivables due from the public include reimbursable work billings and other amounts related to trade receivables, overpayments, and other miscellaneous receivables.

Custodial receivables represent amounts due as a result of consent agreements reached with individuals or firms that violated petroleum pricing regulations during the 1970s. The majority of these receivables are with individuals or firms that are in bankruptcy, or collection action is being taken by the Department of Justice. Many cases handled by the Department of Justice will result in complete write-offs or settlement agreements for amounts significantly less than the original consent agreement. Allowance accounts have been established to reflect the realistic potential for recovery of amounts owed.

5. Stockpile Materials, Net

Stockpile materials consist of crude oil held in the Strategic Petroleum Reserve and nuclear materials. The Strategic Petroleum Reserve consists of 574 million barrels of crude oil stored in salt domes, terminals, and pipelines. The reserve provides a deterrent to the use of oil as a political instrument and provides an effective response mechanism should a disruption occur. Oil from the reserve may be sold only with the approval of Congress and the President of the United States. Congress authorized the sale of approximately 9.6 million barrels of oil from the reserve in FY 1997.

Nuclear materials include weapons and related components, including those in the custody of the Department of the Defense under Presidential Directive, and materials used for research and development purposes.

Stockpile materials are recorded at historical costs in accordance with Statement of Federal Financial Accounting Standard No. 3, except for certain nuclear materials which have been identified as surplus or excess to DOE's needs. These nuclear materials are recorded at their net realizable value.

6. Property, Plant and Equipment, Net

(in millions)

	Acquisition Cost	Accumulated Depreciation	Net Book Value
Land and land rights	$500	($4)	$496
Structures and facilities	28,859	(16,922)	11,937
ADP software	78	(63)	15
Equipment	16,035	(10,143)	5,892
Natural resources	11	(2)	9
Construction work in process	3,700		3,700
Total property, plant, and equipment	$49,183	($27,134)	$22,049

7. Regulatory Assets and Related Public Debt

DOE's power marketing administrations record certain assets in accordance with Statement of Financial Accounting Standards (SFAS) No. 71, *Accounting for the Effect of Certain Types of Regulation*. The provisions of SFAS No. 71 require that regulated enterprises reflect rate actions of the regulator in their financial statements, when appropriate. These rate actions can provide reasonable assurance of the existence of an asset, reduce or eliminate the value of an asset, or impose a liability on a regulated enterprise.

The Bonneville Power Administration (BPA) has acquired all or part of the generating capability of five nuclear power plants as well as several hydroelectric projects. The government's contracts with these utilities require BPA to pay all or part of the annual projects' budgets, including debt service, whether or not all the projects are completed. Because these projects' current and future costs can be recovered through BPA's electricity rates, the Statement of Financial Position includes a regulatory asset and related debt of $7,106 million for these contracts. BPA has also recorded a $91 million asset and related debt for the unpaid balance of its share of estimated decommissioning costs for Trojan's nuclear plant.

8. Custodial Assets

(in millions)

	Funds in Treasury	Investments	Accounts Receivable	Petroleum Reserve	Total
Petroleum Pricing Violation Escrow Fund		$597	$174		$771
Oil held in Strategic Petroleum Reserve for DOD				$106	106
Other custodial assets	$37	4			41
Total custodial assets	$37	$601	$174	$106	$918

Petroleum Pricing Violation Escrow Fund

Pursuant to the Emergency Petroleum Allocations Act of 1973, DOE is responsible for recovering oil pricing overcharges and making restitution to injured parties. Monies received are invested in Treasury securities and certificates of deposit with minority financial institutions pending disbursement to injured parties or returned to Treasury.

Oil Held in Strategic Petroleum Reserve for DOD

The FY 1993 Defense Appropriations Act authorized DOE to acquire, transport, store, and prepare for ultimate drawdown of crude oil for the Department of Defense (DOD). The crude oil purchased with DOD funding is commingled with DOE stock and is held for DOD's future use.

Other Custodial Assets

Other custodial assets include funds in various Treasury deposit and special receipt accounts which are not available to fund DOE's operations.

9. Debt (Intragovernmental)

To finance its capital programs, the Bonneville Power Administration is authorized to issue to Treasury up to $3,750 million of interest-bearing debt with terms and conditions comparable to debt issued by U.S. government corporations. A portion ($1,250 million) is reserved for conservation and renewable resource loans and grants. At September 30, 1996, $2,456 million of this debt was outstanding. The average interest rate of BPA's long-term debt exceeds the rate which could be obtained currently. As a result, the fair value of BPA's long-term debt, based on discounting future cash flows using rates offered by Treasury as of September 30, 1996, for similar maturities, exceeds carrying value by approximately $209 million. BPA's policy is to refinance debt that is callable when associated benefits exceed costs of refinancing.

10. Appropriated Capital Owed to Treasury

Appropriated capital owed to Treasury represents the balance of appropriations provided to DOE's power marketing administrations for construction and operation of power projects which will be repaid to Treasury. The amount owed also includes accumulated interest on the net unpaid Federal investment in the power projects. The Federal investment in these facilities is to be repaid to Treasury within 50 years from the time the facilities are placed in service or are commercially operational. Replacements to Federal investments are generally to be repaid over their expected useful service lives. There is no requirement for repayment of a specific amount of Federal investment on an annual basis.

Each of the power marketing administrations, except the Bonneville Power Administration, receives an annual appropriation to fund operation and maintenance expenses. These appropriations totaled $300 million in FY 1996. These appropriated funds are repaid to Treasury from the revenues generated from the sale of power and transmission services. To the extent that funds are not available for payment, such unpaid annual net deficits become payable from the subsequent years' revenues prior to any repayment of Federal investment. DOE treats these appropriations as a borrowing from Treasury, and as such, the Statement of Operations and Changes in Net Position does not reflect these funds as a financing source.

DOE's financial statements do not reflect the Federal investment in power generating facilities owned by the U.S. Department of Defense, Army Corps of Engineers; the U.S. Department of Interior, Bureau of Reclamation; and the U.S. Department of State, International Boundary and Water Commission. DOE's power marketing administrations are responsible for collecting and remitting to Treasury revenues resulting from the sale of hydroelectric power generated by these facilities.

11. Governmental Accounts Payable

(in millions)

Accrued payroll and benefits	$748
Accounts payable and other accrued expenses	3,230
Petroleum Pricing Violation Escrow Fund balance payable to injured parties	719
Contract holdbacks	56
Other	134
Total	$4,887

12. Deferred Revenues and Other Credits

(in millions)

Nuclear Waste Fund deferred revenues	$8,205
Advances	160
Petroleum Pricing Violation Escrow Fund	52
Total deferred revenues and other credits	$8,417

Nuclear Waste Fund revenues are accrued based on fees assessed against owners and generators of high-level radioactive waste and spent nuclear fuel and interest accrued on investments in Treasury securities. These revenues are recognized as a financing source as costs are incurred for Nuclear Waste Fund activities. Annual adjustments are made to defer revenues that exceed the Nuclear Waste Fund expenses. The FY 1996 deferred fee adjustment totaled $962 million.

13. Environmental Liabilities

(in millions)

Legacy wastes and surplus facilities:	
FY 1996 BEMR mid-range estimate	$226,950
Adjustments:	
Additional decommissioning liability for Y-12 weapons plant	2,253
Portion attributable to future operations	(20,547)
FY 1996 legacy waste expenditures	(6,518)
Adjusted BEMR liability	$202,138
Dispositioning of excess plutonium	2,100
Dispositioning of excess highly enriched uranium waste	592
Deactivation and decommissioning of inactive naval reactors facilities	833
Nuclear Waste Fund disposal fees	1,071
Total legacy waste and surplus facilities liability	$206,734
Stabilization, deactivation and decommissioning of active facilities	22,139
Total environmental liabilities	$228,873
Amount funded by current appropriations	(1,165)
Total unfunded environmental liabilities	$227,708

During World War II and the Cold War, the United States developed a massive industrial complex to research, produce, and test nuclear weapons. The nuclear weapons complex included nuclear reactors, chemical processing buildings, metal machining plants, laboratories, and maintenance facilities that manufactured tens of thousands of nuclear warheads and conducted more than one thousand nuclear explosion tests.

At all sites where these activities took place, some environmental contamination occurred. In this regard, the treatment and storage of radioactive and chemical waste resulted in contamination of soil, surface water, and groundwater and an enormous backlog of waste and dangerous materials. The environmental legacy derived from the process of producing nuclear weapons includes thousands of contaminated areas and buildings and large volumes of waste and special nuclear materials requiring treatment, stabilization, and disposal. Approximately one-half million cubic meters of radioactive high-level, mixed, and low-level waste must be stabilized, safeguarded, and dispositioned, including a quantity of plutonium sufficient to fabricate thousands of nuclear weapons.

DOE's environmental liability is estimated at almost $229 billion. This estimate includes the cost of addressing existing (legacy) wastes and those facilities that have been declared surplus now or will be surplus prior to October 1998. In addition, DOE's environmental liabilities include stabilization, deactivation, and decommissioning costs related to facilities that are still operating and currently have no scheduled shutdown date.

Legacy Wastes and Surplus Facilities

Baseline Environmental Management Report Estimate

DOE manages one of the largest environmental programs in the world -- with more than 150 sites in more than 30 states and Puerto Rico. The primary focus of the program is to reduce health and safety risks from radioactive waste and contamination resulting from production, development, and testing of nuclear weapons.

As required by the FY 1994 National Defense Authorization Act, DOE prepares an annual Baseline Environmental Management Report (BEMR) on the activities and potential costs required to address the

waste, contamination, and surplus nuclear facilities that are the responsibility of DOE's Office of Environmental Management (EM).

The FY 1996 BEMR base-case estimate of the life-cycle costs for DOE's environmental management program ranges from $189 to $265 billion in constant 1996 dollars, with a mid-range estimate of $227 billion. The estimate begins in FY 1996 and ends in approximately 2070, when environmental activities are projected to be substantially completed. The mid-range estimate represents the life-cycle costs for all site specific activities and projects identified in the Baseline Report. The upper and lower ranges were estimated using a probabilistic analysis of each site's evaluation of levels of confidence in their base-case estimates.

During the latter part of FY 1996, DOE embarked on a new vision for addressing the legacy of the Cold War and disposing of nuclear materials and waste. The vision is the clean up of most of the Environmental Management nuclear sites (except for some waste streams at a small number of sites) within 10 years, while complying with compliance agreements and other legal obligations as they evolve over the 10-year period. Strategically, the 10-year plan, which may result in cost savings from the BEMR estimate, will be accomplished through: receipt of stable annual appropriations; enhanced assessment and remediation strategies; use of innovative technologies; accelerated disposal of inventoried waste; shared use of waste treatment and disposal capabilities; reduced cost of on-site treatment and disposal capabilities; retention of institutional control; reinvestment of savings back into the program; and program efficiencies.

Notwithstanding this new direction, estimates associated with the 10-year plan have not replaced the BEMR estimate in the FY 1996 financial statements, as the 10-year site cleanup plans and related estimates are still being refined and verified.

In FY 1996, DOE's environmental liability related to the BEMR estimate totaled more than $202 billion, which was based on the BEMR mid-range estimate less net adjustments of $25 billion. These adjustments included the following:

- a reduction of $20,547 million representing the amount included in the mid-range estimate for costs associated with processing future waste from ongoing operations;

- a reduction of $6,518 million representing the cost of cleanup activities performed by DOE during FY 1996; and

- an increase of $2,253 million for additional decommissioning costs at the Y-12 weapons plant which were omitted from the FY 1996 BEMR estimate in error.

The BEMR cost projections currently exceed budget availability. The projected budget target (as of October 1995), based on larger Federal budget realities, indicates that the environmental management program will be funded at approximately $5.5 billion in annual funding (in current dollars) by the year 2000. After accounting for inflation, this number equates to $4.9 billion in constant 1996 dollars. The difference between the assumed funding for the base case estimate and the funding target amounts to $27 billion over a 25-year period. This shortfall could necessitate delays or shifts of work scope in the environmental program that may result in significant cost growth in out years.

Estimating the cost of DOE's environmental cleanup liability requires making assumptions about future activities and is inherently uncertain. The future course of DOE's environmental management program will depend on a number of fundamental technical and policy choices, many of which have not been made. Ultimately, these decisions will be made on the basis of fulfilling Congressional mandates, regulatory direction, and stakeholder input.

The cost and environmental implications of alternative choices can be profound. For example, many contaminated sites and facilities could be restored to a pristine condition, suitable for any desired use; they could also be restored to a point where they pose no near-term health risks to surrounding communities but are essentially surrounded by fences and left in place. Achieving pristine conditions would have a higher cost but may or may not warrant the costs and potential ecosystem disruption or be legally required.

The following key assumptions were used in estimating the environmental liability:

- DOE has identified approximately 10,500 potential release sites from which contaminants could migrate into the environment. Although virtually all of these sites have been at least partially characterized, final remedial action and/or regulatory decisions have not been made for most sites. Site specific assumptions regarding the amount and type of contamination and the remediation technologies that will be utilized were used in estimating the environmental restoration costs. These site specific assumptions are described in Volumes II and III of the 1996 Baseline Report.

- The Waste Isolation Pilot Plant will open in 1998. In addition, the first geological repository for high-level radioactive waste will open in 2010. At that time, it

will accept spent nuclear fuel from commercial utilities. In 2016, the repository will begin accepting defense high-level waste and will begin accepting DOE-owned fuel shortly thereafter.

- Only existing technologies, such as pumping and treating groundwater, are assumed to be available for estimating cleanup costs. Estimates were based on remedies considered technically and environmentally reasonable and achievable by local project managers and appropriate regulatory authorities.

- Environmental cleanup will be considered substantially complete when all sites have been remediated and when wastes generated from previous activities and from remediation and stabilization activities are safely disposed.

- Projects with no current feasible remediation approach are excluded from the estimate. The cost estimate would be higher if some remediation were assumed for these areas for which complete cleanup is not technically feasible with existing technologies. However, because no effective remedial technology could be identified, no basis for estimating cost was available. Significant projects excluded are:

  - nuclear explosion test areas (e.g., Nevada Test Site);
  - large surface water bodies (e.g., Clinch and Columbia rivers); and
  - most groundwater (even with treatment, future use will remain restricted).

- Costs related to the disposition of depleted uranium hexafluoride (UF-6) are excluded from the estimate. DOE is assessing strategies for long-term management of approximately 560,000 metric tons of depleted UF-6 and plans to issue a draft programmatic environmental impact statement in FY 1998. DOE estimates that, as of September 30, 1996, the cost of depleted UF-6 disposition will range from $1.3 billion to $3.1 billion, with a probable cost of $1.4 billion, excluding adjustments for inflation after September 30, 1995. However, the extent to which DOE's stockpile of depleted UF-6 will require disposal is dependent on restrictions on the use of this material for military purposes and on other alternative uses.

In addition to the assumptions and exclusions identified above, other factors affect the certainty of the BEMR estimate. Individual project cost estimates include anticipated productivity gains. While DOE was successful in reducing costs through productivity savings in FY 1996, the extent to which such reductions will continue is uncertain. The length of the remediation program is also sufficient to introduce a variety of uncertainties into any cost and schedule estimate. In addition to the above factors, the BEMR estimate was calculated in constant FY 1996 dollars rather than future cash flows, and potential cost increases caused by future inflation could result in costs that are substantially higher than the recorded liability.

The base-case cost estimate was constructed with data provided primarily by the field offices and sites. The cost and schedules were based on meeting existing compliance agreements, including milestones for as long as they were established, consistent with existing Federal, State and/or local statutes and/or regulations. Information included cost and schedule estimates for environmental restoration; nuclear material and facility stabilization; and waste treatment, storage, and disposal activities at each installation. It also includes costs for related activities such as landlord responsibilities, program management, and legally prescribed grants for participation and oversight by Native American tribes and regulatory agencies.

More detailed information concerning DOE's methodology for estimating the environmental management program costs can be found in the 1996 Baseline Environmental Management Report available to the public from the U.S. Department of Commerce, Technology Administration, National Technical Information Service, Springfield, VA 22161. (703) 487-4650.

Dispositioning of excess plutonium

The Nuclear Weapons Council declared and the Secretary of Energy announced that 38.2 metric tons of weapons grade plutonium are excess to national security needs. DOE has considered a variety of disposition methodologies for this excess material. In December 1996, DOE selected a preferred alternative for the storage and disposition of the excess plutonium. The preferred alternative is to reduce, over time, the number of locations where the various forms of plutonium are stored, while the preferred alternative for disposition is to pursue a strategy that allows for immobilization of excess plutonium in glass or ceramic forms and burning of the excess material as mixed oxide fuel in existing reactors. DOE recorded a $2.1 billion unfunded liability in FY 1996 to recognize the estimated cost in constant 1996 dollars of the preferred alternative. A formal record of decision regarding the storage and disposition methodology was announced by the Secretary of Energy in January 1997.

Dispositioning of excess highly enriched uranium waste

The Nuclear Weapons Council declared and the Secretary of Energy announced that 174.3 metric tons of DOE's highly enriched uranium (HEU) were excess to national security needs. Most of this material will be blended for sale as low-enriched uranium (LEU) and used over time as commercial nuclear reactor fuel to recover its value. Material that cannot be economically recovered will be blended to LEU for disposal as low-level waste. At least 26.1 metric tons of the excess HEU will be disposed of as waste. DOE recorded a $592 million unfunded liability in FY 1996 for the disposition of the HEU estimated to be waste.

Deactivation and decommissioning of inactive naval reactors facilities

Deactivation and decommissioning liabilities totaling $833 million for inactive naval facilities represent anticipated remediation costs for those facilities at the Pittsburgh and Schnectady Naval Reactors Offices that have ceased operations. The methodology used for estimating the environmental liabilities for these facilities was similar to the approach used in estimating the liabilities for active facilities, in that experiences of similar types of facilities further along in the decommissioning process were used as a basis for determining the estimate.

Nuclear Waste Fund Fees

The Nuclear Waste Policy Act of 1982 established DOE's responsibility to provide for permanent disposal of the nation's high-level radioactive waste and spent nuclear fuel. The Act requires that owners and generators of nuclear waste pay the full cost of the program and, to that end, establish a fee which DOE must collect and annually assess to determine its adequacy.

To date, no agreement has been reached for payment of fees and interest to the Nuclear Waste Fund (NWF) for DOE's defense high-level waste share of costs. As of September 30, 1996, DOE has paid or funded $527 million of its share of costs. DOE has recorded a $1,071 million unfunded liability of as of September 30, 1996, for the balance owed to the NWF.

Stabilization, deactivation, and decommissioning of active facilities

Environmental liabilities for active facilities represent anticipated remediation costs for those facilities that are conducting ongoing operations but will ultimately require stabilization, deactivation, and decommissioning. The total estimated remediation cost was accrued up front rather than being allocated over the lives of the assets, as the cost will not be recovered through user charges. DOE recorded a $22,139 million liability which is considered the best cost estimate within the $13.8 billion to $37.8 billion range for expected environmental costs at 32 sites. This estimate is not based on costs determined by remediation/feasibility studies performed at the active sites. Rather, similar BEMR site conditions were used as a basis for the estimate. In this regard, BEMR cost models and data were used to extrapolate stabilization, deactivation, and decommissioning costs for contaminated active facilities and structures not included in the BEMR.

14. Pension and Other Actuarial Liabilities

(in millions)

Contractor pension plans	$204
Contractor postretirement benefits other than pensions	5,896
Federal employees' workman's compensation benefits	54
Contractor disability and life insurance plans	18
Total actuarial liabilities	$6,172
Less funded actuarial liabilities	(37)
Total unfunded actuarial liabilities	$6,135

Most of DOE's contractors have defined benefit pension plans under which they promise to pay specified benefits to their employees, such as a percentage of the final average pay for each year of service. DOE's cost under the contracts include reimbursement of annual contractor contributions to these pension plans. DOE's contractors also sponsor postretirement benefits other than pensions (PRB) consisting of predominantly postretirement health care benefits. In the past, these costs were recognized on a pay-as-you-go or cash basis. Since DOE approves the contractors' pension and postretirement benefit plans and is ultimately responsible for funding the plans, the responsibility for any related liabilities rests with DOE. DOE also reimburses the Department of Labor for Federal employees' workman's compensation benefits. The Department of Labor's actuarial estimate of DOE's unfunded liability for future workman's compensation benefits as of September 30, 1996, was $54 million. DOE also reimburses its major contractors for employee disability insurance plans. The actuarial liability as of September 30, 1996, for these plans was $18 million.

Contractor Pension Plans

DOE adopted SFAS No. 87, *Employers' Accounting for Pensions*, beginning in FY 1996 for contractor employees, for whom DOE has a continuing pension obligation. As of September 30, 1996, DOE has prepaid pension costs of $84 million and accrued pension costs of $204 million which are included in these statements. DOE has a continuing obligation for a variety of contractor-sponsored pension plans (51 qualified and 6 nonqualified). In this regard, benefit formulas consist of final average pay (36 plans), career average pay (8 plans), dollar per month of service (12 plans), and one defined contribution plan with future contributions for retired employees. Twenty-nine of the plans cover nonunion employees only, 16 cover union employees only, and 12 cover both union and nonunion employees.

For qualified plans, DOE's current funding policy is for contributions made to a trust during a plan year for a separate defined benefit pension plan to not exceed the greater of: (1) the minimum contribution required by Section 302 of the Employee Retirement Income Security Act (ERISA) or (2) the amount estimated to eliminate the unfunded current liability as projected to the end of the plan year. The term "unfunded current liability" refers to the unfunded current liability as defined in Section 302(d)(8) of ERISA. For nonqualified plans, the funding policy is pay-as-you-go.

Plan assets generally include cash and equivalents, stocks, corporate bonds, government bonds, real estate, venture capital, international investments, and insurance contracts.

Assumptions and methods

In order to provide consistency among the various DOE contractors, certain standardized actuarial assumptions were used. These standardized assumptions include the discount rates and an expected long-term rate of return on plan assets, salary scale, and any other economic assumption consistent with an expected long-term inflation rate of 3.5 percent for the entire U.S. economy with adjustments to reflect regional or industry rates as appropriate. In most cases, ERISA valuation actuarial assumptions for demographic assumptions were used.

The following specific assumptions and methods were used in determining the pension estimates:

The weighted average discount rate of 7.5 percent was used, and the average long-term rate of return on assets was 8.5 percent in determining the net periodic pension cost for FY 1996. The weighted average discount rate used to determine the vested benefit obligation, accrued benefit obligation, and projected benefit obligation as of September 30, 1996, was 7.75 percent. The average rate of compensation increase was 5 percent.

Straight line amortization of unrecognized prior service cost over the average remaining years of service of the active plan participants and the minimum amortization of unrecognized gains and losses were used. The transition obligation was amortized over the greater of 15 years or the average remaining service.

Table 1 sets forth the vested benefit obligation, accrued benefit obligation, projected benefit obligation, plan assets, and a reconciliation of the funded status to the prepaid/(accrued) pension cost after minimum liability. Table 2 sets forth the components of net periodic pension cost for FY 1996.

Table 1

September 30, 1996	*(in millions)*
Vested Benefit Obligation	($8,748)
Accrued Benefit Obligation	(9,310)
Projected Benefit Obligation:	
Projected Benefit Obligation	(11,142)
Plan Assets	14,185
Funded Status	$3,043
Unrecognized Transition Obligation/(Asset)	(1,696)
Unrecognized Prior Service Cost	-
Unrecognized (Gain)/Loss	(1,347)
Prepaid/(Accrued) Pension Cost	-
Adjustment required to reflect minimum liability	(120)
Prepaid/(Accrued) pension cost after minimum liability	($120)
Total Prepaid Pension Cost after minimum liability	$84
Total (Accrued) Pension Cost after minimum liability	(204)

In the interest of brevity, information regarding all defined benefit plans is summarized in a single table. Assets of one plan are not available to satisfy liabilities of another plan.

Table 2

FY 1996	*(in millions)*
Net Periodic Pension Cost:	
Service Cost	$376
Interest Cost	810
Actual Return on Plan Assets	(1,743)
Net Amortization and Deferral	646
Impact of Curtailment or Special Termination Benefits*	31
Total Net Periodic Pension Cost	$120

* Income of $.5 million for a curtailment at the National Renewable Energy Laboratory and expense of $16.8 million for curtailment at Lockheed Martin Energy Systems were recognized in FY 1996. A loss for curtailments at Westinghouse Hanford (now Fluor Daniel Hanford), was not included in the net periodic pension cost since the curtailment loss was offset against the unrecognized gain. However, costs were recognized for special termination benefits of $14 million.

Contractor Postretirement Benefits Other Than Pensions (PRB)

DOE adopted SFAS No. 106, *Employers' Accounting for Postretirement Benefits Other Than Pensions*, beginning in FY 1994 for contractor employees for whom DOE has a continuing obligation. SFAS No. 106 requires that the cost of PRB be accrued during the years that the employees render service. As of September 30, 1996, DOE has an accrued PRB liability of $5,896 million. Prior to FY 1994, PRB costs, consisting of predominantly retiree health care, were recognized as expenses when claims were paid. Generally, the PRB plans are unfunded, and DOE's funding policy is to fund on a pay-as-you-go basis. There are 8 contractors, however, that are prefunding benefits in part as permitted by law.

DOE's contractors sponsor a variety of postretirement benefits other than pensions. Benefits consist of medical (35 contractors), dental (14 contractors), life insurance (23 contractors), and Medicare Part B premium reimbursement (4 contractors). Thirty-one of the contractors sponsor a traditional indemnity plan, a PPO, an HMO without a gatekeeper, or similar plan. Eleven of these also have a point of service plan, an HMO with a gatekeeper, or similar plan. Four additional contractors have only a point of service plan, an HMO with a gatekeeper, or similar plan.

Assumptions and methods

In order to provide consistency among the various DOE contractors, certain standardized actuarial assumptions were used. These standardized assumptions include medical and dental trend rates, discount rates, and mortality assumptions.

Table 3

September 30, 1996	*(in millions)*
Accumulated Postretirement Benefit Obligation:	
Fully eligible actives	($708)
Other actives	(1,918)
Retirees	(2,263)
Total APBO	($4,889)
Plan assets	116
Funded status	($4,773)
Unrecognized prior service cost	(93)
Unrecognized (gain)/loss	(1,030)
Accrued postretirement benefit liability	($5,896)

Table 4

FY 1996	*(in millions)*
Net Periodic Postretirement Benefit Cost:	
Service cost	$181
Interest cost	352
Actual return on plan assets	(8)
Net amortization and deferral	(54)
Impact of curtailment*	(1)
Total Net Periodic Postretirement Benefit Cost	$470

The following specific assumptions and methods were used in determining the PRB estimates:

The medical and drug trend rates for a point of service plan, an HMO with a gatekeeper, or similar plan for under age 65, grade from 8.0 percent in 1995 down to 5.5 percent in 2002 and later and, for over age 64, grade from 7.25 percent in 1995 down to 5.5 percent in 2002 and later. For a PPO, a traditional indemnity plan, an HMO without a gatekeeper, or similar plan, the trend rates for under age 65 grade from 13.0 percent in 1995 down to 6.5 percent in 2002 and later and, for over age 64, grade from 11.5 percent in 1995 down to 6.5 percent in 2002 and later. The dental trend rates at all ages grade down from 8.0 percent in 1995 to 5.5 percent in 2002 and later.

The weighted average discount rate of 7.5 percent was used, and the average long-term rate of return on assets was 7.33 percent in determining the net periodic postretirement benefit cost for FY 1996. The weighted average discount rate used to determine the accumulated postretirement benefit obligation as of September 30, 1996, was 7.75 percent. The rate of compensation increase was the same rate as each contractor used to determine pension contributions.

Straight line amortization of unrecognized prior service cost over the average remaining years of service to full eligibility for benefits of the active plan participants and the minimum amortization of unrecognized gains and losses were used. DOE chose immediate recognition of the transition obligation existing at the beginning of FY 1994.

Table 3 sets forth the components of the accumulated postretirement benefit obligation, plan assets, and a reconciliation of the funded status to the accrued postretirement benefit liability. Table 4 sets forth the components of net periodic postretirement benefit cost for FY 1996. Table 5 sets forth the effect of a one percentage point increase in the assumed health care cost trend rates for each future year.

Table 5

Trend Rate Sensitivity	*(in millions)*	
	Base Valuation	1% Trend Increase
Service Cost plus Interest Cost for health care benefits	$ 493	$ 595
APBO as of Sep. 30, 1996 for health care benefits	4,409	5,145

* Income of $1.3 million was recognized in FY 1996 for curtailment at Princeton Plasma Physics Laboratory. Also, a loss for curtailments resulting from a special early retirement program at Westinghouse Hanford (now Fluor Daniel Hanford) was not included since the loss was included as an offset to the unrecognized gain.

15. Other Governmental Liabilities (unfunded)

(in millions)

Environment, safety, and health compliance activities	$1,152
United States Enrichment Corporation	352
Uranium/thorium reimbursements	241
Capital leases	141
Accrued annual leave of Federal employees	87
Other unfunded liabilities	68
Total other governmental liabilities	$2,041

Environment, Safety and Health Compliance Activities

DOE accrued a $1,152 million estimated liability in FY 1996 for those activities necessary to bring its facilities and operations into compliance with existing environmental, safety, and health (ES&H) laws and regulations (e.g., Occupational Safety and Health Act; Clean Air Act; Safe Drinking Water Act). Types of activities included in the estimate relate to the following: upgrading site wide fire and radiological programs; nuclear safety upgrades; industrial hygiene and industrial safety; safety related maintenance; emergency preparedness programs; life safety code improvements; and transportation of radioactive and hazardous materials. The estimate covers corrective actions expected to be performed in FY 1997 and beyond for programs outside the purview of DOE's Environmental Management (EM) Program. ES&H activities within the purview of the EM program are included in the environmental liability estimate.

A DOE assessment conducted during FY 1996 identified additional ES&H vulnerabilities at 13 sites where highly enriched uranium is stored or handled. An estimate of the liability related to these vulnerabilities is not available. Therefore, these statements do not reflect the costs to address corrective actions needed at these sites.

United States Enrichment Corporation (USEC)

DOE has entered into an agreement with USEC that requires DOE to fund certain costs associated with the gaseous diffusion plants leased by USEC. DOE's unfunded liabilities for these costs as of September 30, 1996, totaled $352 million for nuclear safety upgrades to the plants, security, and processing costs for highly enriched material sold to USEC and decommissioning costs for the plants supplying electrical energy to the gaseous diffusion plants.

Uranium/Thorium Reimbursements

The Energy Policy Act of 1992, as amended by the Uranium Mill Tailings Radiation Control Act, provides that DOE's Uranium Enrichment Decontamination and Decommissioning (D&D) Fund will reimburse licensees operating uranium or thorium processing sites for the cost of environmental cleanup at those sites, subject to maximum reimbursements of $350 million for uranium licensees and $65 million for the thorium licensee, plus adjustments for inflation. Of the total liability of $250 million at September 30, 1996, $241 million was not funded by appropriations of the D&D Fund.

Capital Leases

DOE's contractors lease facilities, machinery, equipment, and other assets. The assets under capital leases are recorded under the lesser of the present value of minimal lease payments or the fair value of the assets. Unfunded capital lease liabilities totaled $141 million as of September 30, 1996, and generally reflected lease agreements in effect prior to FY 1993. Subsequent capital leases, except for telecommunications and certain computer leases, are required to be funded by current appropriations.

16. Contingencies

DOE is a party in various administrative proceedings, legal actions and tort claims which may ultimately result in settlements or decisions adverse to the Federal government. DOE has accrued contingent liabilities where losses are determined to be probable and the amounts can be estimated.

Other significant contingencies exist where a loss is reasonably possible, or where a loss is probable and an estimate cannot be determined. In some cases, a portion of any loss that may occur may be paid from Treasury's Judgment Fund. The following are other significant contingencies:

- *Toxic Releases from DOE's Facilities* - DOE's contractors are defendants in a number of class action suits arising from alleged environmental contamination of air, water, and soil affecting communities surrounding various DOE facilities. Collectively, in the most significant cases involving facilities at Portsmouth and Mound, Ohio; Rocky Flats, Colorado; Hanford, Washington; and

Brookhaven, New York, the claimants seek in excess of $3.5 billion in damages. DOE's contractors are vigorously contesting all of these cases, but an evaluation of the likely outcome of these claims cannot be estimated at this time.

- *Human Radiation Experiments* - DOE and its contractors are the defendants in a number of individual and class action suits, as well as administrative claims, arising from past human radiation experiments sponsored or carried out by the Federal government. In the aggregate, the claimants seek more than $1 billion in damages. Due to the preliminary nature of these matters, an evaluation of the likely outcomes of these claims cannot be estimated at this time. While the cases will be vigorously contested, possibilities of settlement will also be pursued.

- U.S. v. Yankee Atomic Electric Company - This is an appeal (and cross appeal) from a decision of the Court of Federal Claims ordering the refund of special assessments totaling $2.9 million paid by Yankee into the Uranium Enrichment Decontamination and Decommissioning Fund. DOE is appealing the lower court's adverse decision and believes it will ultimately prevail in this action. Should Yankee prevail against DOE in this matter, Yankee will not pay future assessments amounting to more than $10 million. In addition, the validity of substantially all past and future assessments against domestic utilities, totaling $2,432 million, would be in question.

- *Compliance with the Nuclear Waste Policy Act* - DOE has acknowledged that it will not have a high-level nuclear waste repository on line by the January 31, 1998, date specified in the Nuclear Waste Policy Act (NWPA) of 1982, as amended. In May 1995, various utilities, states, and state public utility commissions filed a petition (Indiana Michigan Power Co. v. DOE) challenging DOE's final interpretation that it was not unconditionally obligated under the NWPA to accept spent nuclear fuel and high-level radioactive waste by January 31, 1998, in the absence of a repository constructed and licensed under the Act. On July 23, 1996, the U.S. Court of Appeals concluded that the NWPA creates an obligation for DOE, in return for the utilities' obligation to pay fees under the Act to start disposing of spent nuclear fuel no later than January 31, 1998, regardless of the availability of a repository or interim storage facility. The court noted that DOE has not yet defaulted on its statutory or contractual obligations with the utilities and found it premature to determine an appropriate remedy or how the disposal obligation might be met in the absence of a repository. DOE decided not to seek a review of the decision by the U.S. Supreme Court and is reviewing options on how to proceed. DOE has not estimated the potential financial impacts of the court's decision,and no provision has been made for any loss in the financial statements.

  In addition to the suit described above, on January 31, 1997, a coalition of 46 State agencies and a coalition of 36 entities filed petitions in the U.S. Court of Appeals for the District of Columbia Circuit seeking review of DOE's alleged breach of its duty to begin disposal of spent nuclear fuel beginning January 31,1998. While the lawsuits do not seek monetary damages, the coalitions seek to suspend future payments to the Nuclear Waste Fund, and place their payments in an escrow fund until DOE commences disposing of the spent nuclear fuel. DOE will vigorously defend the suits, but it is premature to predict what effect these lawsuits will have on DOE's financial statements.

- *Natural Resource Damage Claims* - DOE is disclosing a contingency for potential natural resource damage (NRD) claims filed under the Comprehensive Environmental Response, Compensation, and Liability Act. Such liabilities could result from potential claims filed against DOE for natural resource injuries, primarily those remaining at DOE facilities after cleanup. Although any estimate of such liability is by necessity extremely speculative, the Administration recently estimated the range of DOE's potential NRD liability from about $1 billion to over $2 billion.

  Notwithstanding the potential for such claims, there neither are currently pending claims against DOE nor have there been any successful NRD claims against DOE. DOE's practice of addressing natural resource injuries during the remedy selection process should limit the exposure to potential NRD claims. DOE has initiated other efforts as well that are intended to minimize the potential for NRD claims. These efforts include: creating site-specific advisory boards at its facilities; ensuring participation of interested parties in the remedial planning process; and forming natural resource trustee councils at facilities where there is sufficient interest. In view of the foregoing, DOE currently considers estimating its potential NRD liability speculative, and any potential payment less than probable but reasonably possible. Therefore, DOE has not recognized such a liability in its financial statements to date.

- In FY 1995, the Tenaska Washington Partners (Tenaska) and Chase Manhattan Bank (Chase) filed suit

against the Bonneville Power Administration (BPA) for breach of contract and lost revenues. In June 1996, BPA reached a settlement which resulted in a payment of $115 million by BPA to Chase. Currently, BPA and Tenaska are in binding arbitration to resolve Tenaska's suit. BPA believes that the factual and legal assertions by Tenaska in support of its $1,125 million claim are without merit. However, BPA believes that arbitration could result in an award from the Tenaska case in excess of $115 million. There are defenses available to BPA that could result in a lesser award. Any monetary award received by Tenaska in arbitration will be offset by the $115 million paid by BPA to Chase in settlement of Chase's claim, plus interest accruing on this amount. In the event that Tenaska obtains an award in arbitration that is less than the amount BPA paid to Chase, Tenaska will owe BPA the difference. BPA's minimum liability for this matter has been accrued in DOE's financial statements.

17. Unexpended Appropriations

(in millions)

	Appropriated Funds	Special Funds	Trust Funds	Total
Unobligated				
Available	$1,838	$24		$1,862
Unavailable	561	3		564
Total unobligated	$2,399	$27		$2,426
Undelivered orders	6,301	74	$12	6,387
Unfilled customer orders	(1,807)			(1,807)
Funded environmental liabilities	(1,139)	(26)		(1,165)
Total unexpended appropriations	$5,754	$75	$12	$5,841

18. Revenues and Related Costs from Goods and Services Provided

(in millions)

	Revenues from Goods and Services Provided	Costs of Goods and Services Provided	Net Revenues (Losses)
Public			
Power marketing administrations	$3,372	$2,463	$909
Sale of oil from the Naval Petroleum Reserves	412	161	251
Sale of oil from the Strategic Petroleum Reserve	325	494	(169)
Reimbursable and cooperative work	109	110	(1)
Other	80	71	9
Total public	$4,298	$3,299	$999
Intragovernmental			
Reimbursable work - defense related	767	767	0
Reimbursable work - non defense related	478	478	0
Services performed for the U.S. Enrichment Corporation	525	525	0
Power marketing administrations	119	90	29
Other	69	22	47
Total intragovernmental	$1,958	$1,882	$76
Total	$6,256	$5,181	$1,075

Power Marketing Administrations

DOE's power marketing administrations market electricity generated primarily by Federal hydropower projects. Preference for the sale of power is given to public bodies and cooperatives. Revenues from selling power and transmission services are used to repay Treasury annual appropriations and maintenance costs, repay the capital investments with interest, and assist capital repayment of other features and certain projects.

Sale of Oil from the Naval Petroleum Reserves

Crude oil, natural gas, and liquid gas products produced from the Naval Petroleum Reserves are sold to public customers at bid prices. Proceeds from these sales and royalties from leased acreage are returned to Treasury. DOE's share of FY 1996 production at the Naval Petroleum Reserves totaled 40 million barrels of oil equivalent.

The Naval Petroleum Reserves' lands were withdrawn from public sale in the early 1900's by the U.S.

Government. Therefore, no value has been recorded for the crude oil and gas reserves underlying these lands, and no costs are reflected for the depletion of the reserves.

Sale of Oil from the Strategic Petroleum Reserve

During FY 1996, DOE sold 17.9 million barrels of oil from the Strategic Petroleum Reserve. The first sale consisted of 5.1 million barrels and the proceeds of $97 million were retained by DOE to offset the costs of decommissioning Weeks Island. The second sale consisted of 12.8 million barrels, and the proceeds of $228 million were returned to Treasury.

Reimbursable and Cooperative Work

DOE performs work for other Federal agencies and private companies on a reimbursable work basis and on a cooperative work basis. Whereas reimbursable work is generally not DOE's direct mission, but part of the customer's mission, cooperative work is part of DOE's direct mission. Reimbursable work is financed by funds of Federal agencies ordering the work or by cash advances from non-Federal customers, and DOE receives no appropriated funds for such work or services. Cooperative work, however, is financed by funds appropriated to DOE that may be used in a cooperative effort with one or more Federal or non-Federal participants. Authorities for DOE to perform reimbursable work include the Economy Act of 1932, the Atomic Energy Act of 1954, Intergovernmental Cooperation Act of 1968, Department of Energy Organization Act of 1990, and Intergovernmental Personnel Act of 1970. Authorities for performance of cooperative work include Public Law 98-438, the Energy Reorganization Act of 1974, section 107(a), and Public Law 95-224, the Federal Grant and Cooperative Agreements Act of 1977.

Services Performed for the U.S. Enrichment Corporation (USEC)

USEC leases DOE's gaseous diffusion plants. While DOE does not receive payment from USEC for the lease, USEC does pay for all services provided by DOE or its contractors. Most of the reimbursements are for the cost of providing electricity to operate the gaseous diffusion plants.

19. Other Revenues and Financing Sources

(in millions)

Nuclear Waste Fund	$674
Federal Energy Regulatory Commission	190
Petroleum Pricing Violation Escrow Fund	84
Uranium Enrichment Decontamination and Decommissioning Fund	51
Other	20
Total	$1,019

Nuclear Waste Fund

The Nuclear Waste Policy Act of 1982 requires DOE to assess fees against owners and generators of high-level radioactive waste and spent nuclear fuel to fund the costs associated with management and disposal activities under Titles I and II of the Act. Fees assessed in FY 1996 totaled $641 million. An additional $33 million was earned from the net gains from activities related to the investment in Treasury securities.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission assesses most of its administrative program costs as an annual charge to each regulated entity. These revenues are returned to Treasury when collected.

Petroleum Pricing Violation Escrow Fund

DOE recognized $84 million in revenues in FY 1996 from oil overcharge reimbursements that were deferred in prior years pending a determination of how to distribute funds from the Petroleum Pricing Violation Escrow Fund. In FY 1996, DOE determined that these funds were not needed to settle claims from injured parties and returned the funds, along with $6 million in accrued interest, to Treasury.

Uranium Enrichment Decontamination and Decommissioning Fund

Revenue from assessments against domestic utilities is recognized when such assessments are authorized by legislation. Revenue recognized includes known adjustments for transfers between utilities and other reconciliation adjustments. Increases in current and future assessments due to changes in the Consumer Price Index are recognized in each fiscal year as such changes occur.

20. Receipts Transferred to Treasury and Other Agencies

(in millions)

Power marketing administrations	($732)
Naval Petroleum Reserves	(440)
Strategic Petroleum Reserve	(228)
Federal Energy Regulatory Commission	(187)
Petroleum Pricing Violation Escrow Fund	(90)
Other	(14)
Total	($1,691)

Power Marketing Administrations

Each of the power marketing administrations, except for the Alaska Power Administration, is responsible for collecting and remitting to Treasury revenues attributable to the hydroelectric power projects owned and operated by the U.S. Department of Defense, Army Corps of Engineers; the U.S. Department of Interior, Bureau of Reclamation; and the U.S. Department of State, International Boundary and Water Commission. Revenues collected on behalf of these agencies totaled $732 million in FY 1996.

Naval Petroleum Reserves

Proceeds from the sale of crude oil, natural gas, and liquid gas products produced from the Naval Petroleum Reserves, totaling $412 million in FY 1996, were returned to Treasury. An additional $28 million representing the joint interest costs at the Naval Petroleum Reserves in California reimbursed to DOE by Chevron USA, Inc. was also returned to Treasury.

21. Other Expenses

(in millions)

Nuclear materials expense	$1,128
Other expenses	493
Total other expenses	$1,621

The $1,128 million nuclear materials expense relates primarily to the ongoing dismantlement of that portion of the nuclear weapons stockpile which the Nuclear Weapons Council has declared excess to national security needs. Also included in this amount is a $154 million write-off of an estimated 26.1 metric tons of excess highly enriched uranium that is to be converted to waste. In addition, the nuclear material expense includes an estimated loss of $89.1 million related to the nuclear materials inventory transfers mandated by Public Law 104-134, the United States Enrichment Corporation Privatization Act of 1996. This law requires DOE to transfer up to 50 metric tons of highly enriched uranium and up to 7,000 metric tons of natural uranium to the United States Enrichment Corporation (USEC). USEC will transfer uranium hexaflouride to DOE for sale to Russia and others. The net book value of materials to be transferred by DOE to USEC exceeds the estimated revenues to be generated from the sale of uranium hexaflouride by $89.1 million. This amount was recorded as a liability on DOE's financial statements.

Other expenses consist primarily of write-offs of abandoned projects and adjustments resulting from physical inventories of property, plant, and equipment.

22. Unfunded Liability Adjustments

(in millions)

Adjustments to legacy waste and surplus facilities unfunded liability:	
Increase in Baseline Environmental Management Report estimate	$11,347
FY 1996 appropriations for legacy waste activities	(6,056)
Excess plutonium environmental liability expense	2,100
Excess highly enriched uranium liability expense	592
Environmental liability expense for naval reactors legacy wastes	833
Decrease in NWF fee liability	(27)
Net increase in legacy waste and surplus facilities unfunded liability	$8,789
Unfunded actuarial liability expense	357
Other net changes in unfunded liabilities	(95)
Total net unfunded liability expenses	$9,051

23. Prior Period Adjustments

(in millions)

Stabilization, deactivation, and decommissioning of active facilities	($22,072)
Unfunded environment, safety, and health compliance activities liability	(1,152)
Write-down of legacy waste facilities & equipment	(1,592)
Reclassification of power marketing administrations' invested capital	(3,797)
Nuclear materials variance	(1,912)
Correction of erroneously capitalized expenditures	(387)
Excess nuclear materials valuation	431
Other	59
Total	($30,422)

Stabilization, deactivation, and decommissioning of active facilities

DOE accrued $22,072 million for estimated unfunded environmental liabilities during FY 1996 for those facilities that are conducting ongoing operations but will ultimately require stabilization, deactivation, and decommissioning. This brought the total estimated unfunded environmental liability for active facilities to $22,139 million.

Unfunded environment, safety, and health compliance activities liability

DOE accrued a $1,152 million estimated liability in FY 1996 for those activities necessary to bring its facilities and operations into compliance with existing environmental, safety, and health laws and regulations. The estimate covers corrective actions expected to be performed in FY 1997 and beyond for programs outside the purview of DOE's Environmental Management (EM) Program. ES&H activities within the purview of the EM program are included in the environmental liability estimate.

Write-down of legacy waste facilities & equipment

DOE changed its capitalization practices related to environmental management processing facilities and equipment during FY 1995. DOE implemented the guidance of the Financial Accounting Standards Board (FASB) Emerging Issues Task Force Issue 90-8, *Capitalization of Costs to Treat Environmental Contamination*. This guidance requires the expensing of facilities and equipment that treat, store, or dispose of existing environmental wastes generated by past operations (legacy waste facilities and equipment). An estimate of DOE's legacy waste facilities and equipment resulted in a write-down of property, plant, and equipment and a charge to expense of $3 billion during FY 1995. Analysis performed during FY 1996 resulted in an additional write-down of $1,592 million of legacy waste facilities and equipment.

Reclassification of power marketing administrations' invested capital

DOE reclassified the beginning FY 1996 invested capital balance for the power marketing administrations. The net position balance was reclassified to an intragovernmental liability, "Appropriated Capital Owed to Treasury," during FY 1996.

Nuclear materials variance

DOE wrote-off a nuclear materials production variance of $1,912 million in FY 1996. This variance resulted from prior-years' differences between standard and actual production costs for nuclear materials that DOE is no longer producing.

Correction of erroneously capitalized expenditures

DOE wrote-off $387 million from construction work in process for costs that were erroneously capitalized in prior years. These costs related to scientific efforts to determine various technologies for the construction of a tritium production reactor. The program was in the preliminary design phase when it was terminated, and the costs should have been expensed when incurred.

Excess nuclear materials valuation

DOE reduced the value of the nuclear materials stockpile in FY 1995 based on materials that were declared excess to national security needs. During further analysis conducted in FY 1996, it was discovered that some of this material had a valid non-defense use within DOE. This, coupled with refinements in the estimate used in FY 1995, resulted in an increase of $431 million in the nuclear materials stockpile in FY 1996.

24. Other Matters

Fast Flux Test Facility

Based on a decision to shut down DOE's Fast Flux Test Facility (FFTF) and a determination that there was no future mission for the facility, it was written off in FY 1995. However, consideration of the FFTF for a role in the production of tritium prompted an announcement by the Secretary of Energy in January 1997 that DOE is placing the FFTF in a "hot standby" condition. In response to this decision, DOE will return approximately $160 million net book value ($421 million acquisition value and $261 accumulated depreciation) to property, plant, and equipment in FY 1997.

Disposition of Depleted Uranium Generated by the U.S. Enrichment Corporation

Pursuant to Section 3109(a)(3) of the U.S. Enrichment Corporation (USEC) Privatization Act of 1996, DOE will assume the reponsibility for disposal of depleted uranium generated by USEC between July 1, 1993, and the privatization date. This responsibility is dependent on formal establishment of a private corporation to receive the assets and obligations of USEC and continue its business operations, as well as execution of a Memorandum of Agreement between the Office of Management and Budget (OMB) and USEC to implement the requirements of Section 3109 of the Act.

As of September 30, 1996, the private corporation had not been established, nor had negotiations between OMB, USEC, and DOE been finalized. Further, DOE's draft environmental impact statement scheduled for issuance in FY 1998 may identify potential alternative uses for depleted UF-6, which could impact the amount of USEC generated depleted uranium requiring disposal. Accordingly, no provision for the cost of disposal is included in these financial statements.